

CLAIMS

1. A device for blow-molding or stretch blow-molding of containers starting from preforms made of thermoplastic, said device comprising a mold (1) in three parts, namely two half-molds (2) for the body of the container and a mold base (3) for the base of the container, the lower parts of the two half-molds (2) and the upper part of the mold base (3) comprising means (9, 10) which can interlock, in the closed position of the mold, to provide the axial rigidity of the mold in the presence of the blow-molding pressure, the two half-molds (2) being designed to be moved relative to one another, between an open position and a closed position, under the action of actuating means controlled by a fixed cam, this device comprising connection means between at least one half-mold (2) and/or said means for actuating said half-molds, on the one hand, and the mold base (3), on the other hand, so that the movement of the mold base (3) is controlled by the movement of at least one half-mold (2) and/or said actuating means such that:

- during opening of the mold, said actuating means start to move said half-molds apart until said interlockable means (9, 10) are freed from one another, while said connection means remain inoperative and the mold base remains in its position, and then, while said actuating means continue to move the two half-molds apart, the connection means become operational and move the mold base so as to separate it axially from said half-molds,

and such that

- during closing of the mold, said actuating means start to bring the two half-molds together at the same time as said connection means control the axial movement of the mold base until it reaches

its completely raised position, and then, with said connection means becoming inoperative, said actuating means finish bringing the two half-molds together, with engagement with the interlockable means mechanically and axially securing the two half-molds and the mold base, characterized in that the connection means comprise a connecting rod (13) whose ends are provided with coupling means having three rotational degrees of freedom so as to connect it to the half-mold and/or to said means for actuating said half-molds and so as to connect it to the mold base, respectively, and in that the connection of the rod (13) with the mold base (3) is arranged so as, during opening of the mold, to pivot freely under the entraining action of the aforesaid half-mold and/or of said means for actuating said half-molds while the two half-molds are parting until a predetermined angular value (α) is obtained, and then to bear against an abutment attached to the mold base (3) when the half-molds (2) are parting at said angular value (α) and/or when said actuating means are in a position in which the half-molds are parting at said angular value (α), and finally to push the mold base (3) away axially when the two half-molds (2) complete their opening travel, and vice versa during closing of the mold.

2. The molding device as claimed in claim 1, characterized in that said connection means are interposed between one of the half-molds (2) and the mold base (3).

3. The molding device as claimed in claim 1 or 2, characterized in that the coupling means having three rotational degrees of freedom are spherical ball joint couplings (14, 15).

4. The molding device as claimed in claim 1 or 2,

characterized in that the coupling means having three degrees of freedom comprise, for one of them, a spherical ball joint coupling and, for the other, a universal coupling.

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5. The molding device as claimed in claim 3 or 4, characterized in that the lower end of the rod (13) is connected via the respective coupling (15) to a link (18) rotatably articulated on a radial arm (16) attached to the mold base, said abutment consisting of a portion (25) of said arm (16).

6. The molding device as claimed in claim 5, characterized in that the link (18) is articulated on the radial arm (16) by a pin (19) perpendicular to the axis of the mold.

7. The molding device as claimed in claim 5 or 6, characterized in that the link (18) is produced in the form of a solid shoe to which the corresponding coupling (15) is connected.

8. The molding device as claimed in any one of claims 1 to 7, characterized in that elastic return means (20) are coupled to the mold base (3) to assist the axial movement of the mold base from its open position to its closed position.

9. The molding device as claimed in any one of claims 1 to 8, characterized in that the mold (1) is of the hinged type with the two half-molds (2) rotatably articulated relative to one another.